

## IN THE CLAIMS

### **Claims pending:**

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- At time of the Action: 29-54
- After this Response: 29-65

**Canceled or Withdrawn claims:** 1-28

**Amended claims:** 29-40 and 42-53

**New claims:** 54-65

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This listing of claims replaces all prior versions and listings:

1. - 28. canceled.

29. (currently amended) A computer-implemented method ~~providing network attached storage (NAS) services comprising:~~

configuring a distributed processing system ~~by coupling of~~ a multiplicity of distributed devices ~~using coupled by~~ a network, wherein each ~~of the said distributed devices device has is enabled by~~ a client agent program operable to process workloads a workload for the distributed processing system,[[;]]

20       configuring ~~wherein~~ the client agent for a particular said distributed device program to have ~~has~~ a software-based network attached storage (NAS) ~~NAS component configured to~~ assess unused or under-utilized storage resources in selected distributed devices ~~from of~~ the multiplicity of distributed devices;

25       generating a representation by representing with the software-based NAS component that the selected distributed devices are each comprise a NAS devices device having an available amount of storage resources selected from related to the unused and under-utilized storage resources for the selected distributed devices; and

processing one or more of data storage ~~and or~~ access workloads for the distributed processing system by accessing data from or storing data into at least a portion ~~portions~~ of the available amount of storage resources ~~of the selected distributed devices~~ to provide ~~the~~ NAS services service to a client ~~devices~~ device 5 coupled to the network.

30. (currently amended) The method of claim 29, wherein the client agent for the particular said distributed device ~~program~~ enables at least one of the selected distributed devices to operate ~~function~~ as a stand-alone dedicated NAS device.

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31. (currently amended) The method of claim 29, wherein the client agent ~~program~~ for the particular said distributed device enables at least one of the selected distributed devices to function as a location distributed device to store location information for data stored by the selected distributed devices.

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32. (currently amended) The method of claim 31, ~~further comprising enabling wherein~~ the location distributed device is further configured to receive ~~data storage and an access requests~~ request from the client ~~devices~~ ~~coupled to the network~~ device and ~~to~~ direct the client ~~devices~~ device to data requested on at least one of the 20 selected distributed devices storing the requested data.

33. (currently amended) The method of claim 32, further comprising managing ~~the~~ NAS services service for said distributed devices at least in part utilizing ~~at least one~~ a centralized server system.

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34. (currently amended) The method of claim 33, wherein the centralized server system ~~downloads is further configured to enable download of~~ the NAS component to ~~the client agent programs in the selected~~ distributed devices.

5 35. (currently amended) The method of claim 33, ~~wherein further comprising storing with~~ the centralized server system stores location information for ~~the~~ data stored in the selected distributed devices ~~and at least in part directs the client devices to the distributed devices storing the requested data.~~

10 36. (currently amended) The method of claim 35, further comprising utilizing the centralized server system to receive ~~data storage and access requests from the client devices and to route the data for storage and access workloads to the selected distributed devices based in part upon individual capabilities of the selected distributed devices indicated in a capabilities database, wherein the~~ 15 ~~individual capabilities are stored in a capabilities database coupled to the centralized server system.~~

37. (currently amended) The method of claim 29, wherein the network ~~is comprises~~ the Internet.

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38. (currently amended) The method of claim 29, further comprising managing storage resources for the selected distributed devices ~~using with~~ a storage priority control that facilitates full use of the available ~~amounts amount~~ of storage resources for the selected distributed devices.

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39. (currently amended) The method of claim 38, wherein the storage priority control comprises a parameter selectable ~~through by one of~~ the client ~~devices~~device.

5 40. (currently amended) The method of claim 39, wherein the storage priority control comprises storage priority level schemes that prioritize one or more of data storage ~~and or~~ deletion of data.

10 41. (previously presented) The method of claim 39, wherein the storage priority control comprises a priority marking directly given to data or files.

42. (currently amended) A system ~~for providing network attached storage (NAS)~~ services comprising:

15 ~~a distributed processing system configured by coupling a multiplicity of distributed devices using configured to be coupled by a network, wherein each of the multiplicity said distributed devices are enabled by device includes a client agent program to process workloads for the distributed processing system, and each client agent including:~~

20 ~~a software-based network attached storage (NAS) component operating within each of the client agent programs, wherein the software-based NAS component assesses configured to:~~

~~assess unused storage resources of the multiplicity said distributed devices;[.,]~~

~~allocates~~ allocate an available amount of unused storage resources in selected distributed devices ~~of the multiplicity of distributed devices from the multiplicity distributed devices;~~  
5 ~~generates a representation~~ represent that the selected distributed devices ~~are~~ each comprise a NAS ~~device~~ device having the available amount of storage resources;[[,]] and

10 ~~processes~~ process data storage and access workloads ~~in the selected distributed devices for the distributed processing system~~ by accessing data from and storing data into portions of each of the available amounts of unused storage resources in the selected distributed devices to provide the NAS ~~services~~ service to a client ~~device~~ devices coupled to the network.

43. (currently amended) The system of claim 42, wherein ~~the~~ each client agent ~~program~~ is configured to enable ~~enables~~ at least one of the selected distributed 15 devices to operate function as a stand-alone dedicated NAS ~~device~~ device.

44. (currently amended) The system of claim 42, wherein the client agent ~~program~~ is configured to enable ~~enables~~ at least one of the selected distributed devices to function as a location distributed device to store location information 20 for data stored by the selected distributed devices.

45. (currently amended) The system of claim 44, ~~further comprising~~ enabling ~~wherein~~ the location distributed device is configured to receive data storage and ~~an~~ access ~~requests~~ request from the client ~~devices~~ device coupled to the network ~~device~~ and to

direct the client ~~devices~~ device to the data stored on the selected distributed devices that was requested ~~storing the requested data~~.

46. (currently amended) The system of claim 45, wherein the system is further 5 configured to manage ~~comprising~~ managing the NAS ~~services~~ service for said distributed devices at least in part utilizing at least one ~~a~~ centralized server system.

47. (currently amended) The system of claim 46, wherein the centralized server system is further configured to enable download of ~~downloads~~ the NAS 10 component ~~to the client agent programs in~~ to the selected distributed devices.

48. (currently amended) The system of claim 46, wherein the centralized server system is configured to store ~~stores~~ location information for the data stored in the selected distributed devices ~~and at least in part directs the client devices to the~~ 15 ~~distributed devices storing the requested data~~.

49. (currently amended) The system of claim 48, wherein further comprising utilizing the centralized server system is configured to receive data storage and access requests from the client ~~devices~~ device and to route ~~a~~ data storage workload 20 ~~and access workloads~~ to the selected distributed devices based ~~in part~~ upon individual capabilities of the selected distributed devices indicated in a capabilities database, ~~wherein the individual capabilities are stored in a capabilities database~~ coupled to the centralized server system.

50. (currently amended) The system of claim 42, wherein the network ~~is~~ comprises the Internet.

51. (currently amended) The system of claim 42, further comprising ~~managing a storage priority control configured to facilitate use of the available amount of storage resources for the selected distributed devices using a storage priority control that facilitates full use of the available amounts of storage resources.~~

52. (currently amended) The system of claim 51, wherein the storage priority control comprises a parameter selectable ~~through one of~~ ~~by~~ the client ~~devices~~device.

53. (currently amended) The system of claim 52, wherein the storage priority control comprises storage priority level schemes that prioritize one or more of ~~data storage and or deletion of data.~~

54. (previously presented) The system of claim 52, wherein the storage priority control comprises a priority marking directly given to data or files.

20 55. (new) A computer-implemented method comprising:

allocating data for storage among selected devices of a multiplicity of devices that are each independent and available on a network, wherein each of the multiplicity of devices have a software agent that is usable to control storage resources that are unused or underused for that device; and

representing, using one of said software agents, that the selected devices individually comprise a network attached storage (NAS) device with storage capacity equal to a total of the unused or underused storage resource.

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56. (new) The computer-implemented method of claim 55, wherein the allocating is performed by a server.

57. (new) The computer-implemented method of claim 55, wherein the 10 allocating and representing are performed by one of the multiplicity of devices.

58. (new) The computer-implemented method of claim 55, wherein the allocating is performed in accordance with capability vectors calculated for each of the selected devices.

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59. (new) The computer-implemented method of claim 55, further comprising:  
identifying whether the storage resources for a particular device, of the selected devices, are idle, and

20 performing the allocating so a greater portion of the data for storage is sent to the particular device if the storage resources for the particular device are idle, wherein the greater portion is greater than a portion of the data that would be allocated to the particular device if the storage resources for the particular device were not idle.

60. (new) The computer-implemented method of claim 55, wherein the allocating and representing are performed by at least one of the multiplicity of devices via interaction with other devices on a peer-to-peer basis

5 61. (new) A computer-implemented method comprising:

downloading to one or more selected devices, included in a multiplicity of devices, a network attached storage (NAS) component and a portion of a storage workload for storage in memory that is unused or under-utilized; and

10 representing to a client device, coupled to the multiplicity of devices by a network, that each selected device is a dedicated NAS device.

62. (new) The computer-implemented method of claim 61, further comprising storing location information in a database that is usable to indicate locations in memory the portion of the storage workload is stored.

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63. (new) The computer-implemented method of claim 61, wherein the computer-implemented method is performed by a central server coupled to the network.

20 64. (new) The computer-implemented method of claim 61, wherein the computer-implemented method is performed by a particular device of the multiplicity of devices.

25 65. (new) The computer-implemented method of claim 61, wherein the network comprises the Internet.